**How are sports injuries classified and managed?**

Insert school logo or image instead of this box.

**Flipped Learning Booklet**

**Write your name here**

2016-17

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# Key term definitions

Please complete this table as you progress through the booklet.

|  |  |
| --- | --- |
| **Term** | **Definition**  |
| Direct |  |
| Indirect |  |
| Overuse |  |
| Soft tissue |  |
| Hard tissue |  |
| Strain |  |
| Sprain |  |
| Contusion |  |
| Abrasion |  |
| Laceration |  |
| Fracture |  |
| Laxation/dislocation |  |
| Active movement |  |
| Passive movement |  |

# Ways to classify sports injuries

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * ways to classify sports injuries
* direct and indirect
* soft and hard tissue
* overuse
 | * identify specific examples of injuries that reflect each of the classifications
 |

## Content

**Video** *Ways to classify sports injuries* [here](https://youtu.be/WWY_8Recp0k?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/how-are-sports-injuries-classified-and-managed/ways-to-classify-sports-injuries/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

*These notes can be done in the booklet or in a separate exercise book (replace the words in the scaffold).*

|  |
| --- |
| Name, Date, Topic, Class |
| **CUES**Written after the video and classMain ideasQuestions that connect pointsVocabulary wordsUsed for review and study | **NOTES**Taken During the video* Main points
* Bullet points
* Diagrams/charts
* Abbreviate
* Paraphrase
* Outlines

Leave space between topicsAny Questions you still have. |
| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## Think-Pair-Share

*Find a partner and share your notes, questions, summary etc. You need to discuss your main points and* ***justify*** *them to each other. Make any additions to your notes after your conversation and refine your summary.*

## Learn to Activity

*Identify specific examples of injuries that reflect each of the classifications, then classify the injuries in the pictures*

|  |  |
| --- | --- |
| **Injury Classification** | **Injury Example** |
| *Cause* | *Type of tissue* | *Word and/or image* |
| Direct  | Hard tissue |  |
| Indirect  | Soft tissue  |  |
| Overuse  | Hard tissue  |  |
| Overuse  | Soft tissue  |  |
| Direct  | Soft tissue  |  |
| Indirect  | Hard tissue  |  |
|  |  | Dislocated shoulder after falling and landing on his hands. |
|  |  | Lost tooth after being hit in the teeth by a hockey puck |
|  |  | Sprained ankle |
|  |  | Corked thigh / contusion |
|  |  | Achilles tendonitis |
|  |  | Metatarsal stress fracture |

## SEAL, PEEL, or SEXY

1. Read through the article on [structuring extended response](https://www.pdhpe.net/structuring-extended-response/) answers.
2. Read through the sample answer below and highlight the different sections of each paragraph (Statement, Expand, Application/E**x**ample, Link/wh**y**)

**Question**: Justify your classification of a skin abrasion resulting from a netball player falling on the court.

**Sample Answer**

The classification of a sports injury has two sections: how the injury occurred (direct, indirect, overuse), and what type of tissue was injured (hard, soft). The skin abrasion given in the question is a direct soft tissue injury.

The skin abrasion is a soft tissue injury because there is no damage to bone or teeth. Skin is an example of a soft tissue in the body and is frequently injured through sports participation. Because the skin is damaged, the skin abrasion resulting from the netballer falling on the court is an example of a soft tissue injury. However, we need to add the classification of how to this classification of what.

The skin abrasion is also a direct injury Direct injuries occur at the site where an external force was applied to the body. Although the question does not specifically state that the abrasion occurred at the site where the skin made contact with the court, all skin abrasions occur at the site of direct contact with an external force. The external force in this example is the netball court pushing against the skin and causing the abrasion. Therefore the skin abrasion is a direct injury.

When we combine these classifications we have the complete classification for the netballer’s skin abrasion. It is a direct soft tissue injury.

## Past/Practice HSC Questions

1. What would make an injury a direct soft tissue injury rather than an indirect hard tissue injury? – Use examples to support your answer. **6 marks** (use the scaffold if you need to)

**Scaffold for Distinguish**

*Distinguish* - recognise or note / indicate as being distinct or different from; to note differences between.

|  |  |
| --- | --- |
| Issue to be discussed | **Tips**Statement of issue. Preview of each point of difference.  |
| **Differences**Point (type of tissue): Elaboration and support with examples:  | Topic sentence at the beginning of each point followed by explanation and examples to illustrate point. Use linking words between each point such as: *also, in addition, similarly.* *For instance* and *for example* can be used to start sentences that provide examples for your points. Use linking words such as: *on the other hand, whereas, in contrast to, however.* You can again use *for instance, for example* to start sentences that provide examples for your points.  |
| Point (cause of injury): Elaboration and support with examples:  |
| Conclusion/summary |  |

1. What is the difference between an overuse injury, a direct injury and an indirect injury? – Use examples to support your answer. **4 marks** (follow the same structure as above in scaffold)
2. A football player was running after a ball but suddenly fell to the ground holding the back of his leg. It was later diagnosed as a class-2 hamstring strain. Classify the injury. **2 marks**

# Soft tissue injuries

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * soft tissue injuries
	+ tears, sprains, contusions
	+ skin abrasions, lacerations, blisters
	+ inflammatory response
 | * manage soft tissue injuries:
* RICER (Rest, Ice, Compression, Elevation, Referral)
* immediate treatment of skin injuries
 |

## Content

**Video** *Soft tissue injuries* [here](https://youtu.be/qj9wIaEr23I?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/how-are-sports-injuries-classified-and-managed/soft-tissue-injuries/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

*These notes can be done in the booklet or in a separate exercise book (replace the words in the scaffold).*

|  |
| --- |
| Name, Date, Topic, Class |
| **CUES**Written after the video and classMain ideasQuestions that connect pointsVocabulary wordsUsed for review and study | **NOTES**Taken During the video* Main points
* Bullet points
* Diagrams/charts
* Abbreviate
* Paraphrase
* Outlines

Leave space between topicsAny Questions you still have. |
| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## Questions

1. List questions you still have from the video.
	1. *E.g.) what is the first aid response to a laceration?*
2. In pairs or a small group answer each other’s questions. Record answers to your questions, or information you didn’t think about.
3. Propose the hardest question/s your groups had to your teacher.

## Q & A

1. Complete the following sentences
	1. For example, a torn hamstring is an indirect … injury because…
	2. A netballer who rolls her ankle will suffer a … which is an example of an indirect … injury because…
	3. After executing a slide tackle in a soccer match, Fred has a graze on his leg. The technical term for a graze is… and this is an example of a … soft tissue injury because…
	4. For example, a boxer who suffers a laceration over his eye has a direct … tissue injury because…
2. Illustrate the three levels of tear or sprain.

|  |  |  |
| --- | --- | --- |
|  |  |  |

1. Describe the 3 stages of the inflammatory response

|  |  |
| --- | --- |
| **Stage** | **Description** |
| **1** |  |
| **2** |  |
| **3** |  |

## Learn to Activity

1. Complete the table on RICER

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Description** | **Benefit** | **Why** |
| **R**est | *Stop playing**Don’t use the injured area until recovered* | *Prevents further damage to injury* | *The athlete will not move the damaged area causing further damage.* |
| **I** |  |  |  |
| **C** |  |  |  |
| **E** |  |  |  |
| **R** |  |  |  |

1. Describe the main priorities for the immediate treatment of skin injuries.
	1. Why are these the main priorities?

### Practical application

1. In a pair or small group work through the following scenarios and role-play the immediate treatment of the injuries (you will need a first aid kit). You will need to justify (provide reasons why) your treatment as you go.
	1. Carl falls over during a football match and grazes his knee.
	2. Briana is playing netball when she falls to the ground after rolling her ankle.
	3. Samantha is training for the 400m hurdles race, when she hears a snap and feels high levels of pain in her hamstrings.
	4. George went into a tackle and collided heads with the opposing player. He is fine other than a small cut above his eyebrow.
	5. Emily was playing touch football when she ran into the opposition and suffered a cork in her thigh. It has bruised up quite quickly, so she has come off the field.
2. Provide feedback to each other on the treatment AND justification.

## Past/Practice HSC Questions

1. 2011 Question 29 (a) (i) Outline types of soft tissue injuries. **3 Marks** (Scaffold is provided if needed)

**Scaffold for Outline**

*Outline*– state in general terms; indicate the main features.

|  |  |
| --- | --- |
| Issue to be outlined | **Tips**Statement of issue. Preview of main characteristics or features.  |
| Characteristic or feature:Brief description and example: | Topic sentence at the beginning of each paragraph that states main features followed by a description and examples to illustrate point. Use linking words such as: f*or instance, for example, including,* and *such as* to introduce your examples. This should only be a brief overview of the topic no more than two sentences per feature. **There is no need to include a concluding paragraph.**  |
| Characteristic or feature:Brief description and example: |
| Characteristic or feature:Brief description and example: |
| Characteristic or feature:Brief description and example: |

Here is a **sample answer** provided by BOSTES for the question above.

*There are three common types of soft tissue injury:*

* *A tear is a disruption of the fibres of a muscle or tendon. The severity of a tear can range from a microscopic to full rupture of all the connecting soft tissue to a bone or muscle.*
* *A sprain is a tear of the ligament fibres, muscles or tendons that support a joint. Sprains usually occur when a joint is extended beyond its normal range of motion.*
* *A contusion or bruise is a bleeding into any soft tissue structure. It is usually caused by the direct impact of an object or person.*
1. Describe the management of soft tissue injuries. **5 marks** (use scaffold if needed)

**Scaffold for Describe**

*Describe* – Provide characteristics and features

|  |  |
| --- | --- |
| Topic to be described:  | **Tips for writing**Statement of issue. Preview of each characteristic or feature.  |
| Characteristic or featureDescription and example | Topic sentence at the beginning of each paragraph that states characteristic or feature followed by a description and examples to illustrate point. Use linking words such as: *for instance, for example, including* to introduce your examples.  |
| Characteristic or featureDescription and example |
| Characteristic or featureDescription and example |
| Characteristic or featureDescription and example |
| Conclusion  | Brief summary of main characteristics and features. Not necessary if you have given a thorough description in the body of your answer.  |

1. Explain how the management of soft tissue injuries promotes the athlete’s wellbeing. **8 marks** (Use scaffold if needed)

**Scaffold for explain**

*Explain* – relate cause and effect; make the relationships between things evident.

|  |  |
| --- | --- |
| Topic to be explained:  | **Tips for writing**Statement of topic. Preview of causes and effects.  |
| Causes and effectsCause:Elaborate and supportEffect:Elaborate and support | Topic sentence at the beginning of each point on causes followed by explanation and examples to illustrate each cause. Topic sentence at the beginning of each point on effects followed by explanation and examples to illustrate the link to cause. Use linking words between each point (such as: therefore, thus, as a result, leading to), to illustrate the relationship. |
| Causes and effectsCause:Elaborate and supportEffect:Elaborate and support |
| Causes and effectsCause:Elaborate and supportEffect:Elaborate and support |
| RelationshipPointElaborate and support | Topic sentence that shows the direct link between cause and effect. Examples essential to further show the link.  |
| Why and/or how causes relate to effect. | The why and/or how can be illustrated within the previous paragraphs or separately at the end  |

# Hard tissue injuries

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * hard tissue injuries
* fractures
* dislocation
 | * manage hard tissue injuries
* assessment for medical attention
* immobilisation
 |

## Content

**Video** *Hard tissue injuries* [here](https://youtu.be/rV8h4TNbmJo?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/how-are-sports-injuries-classified-and-managed/hard-tissue-injuries/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

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* Abbreviate
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* Outlines

Leave space between topicsAny Questions you still have. |
| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## Social Media

1. Use the video and/or readings to write a tweet (140 characters) on hard tissue injuries (Include #HSCPDHPE and/or @pdhpenet, you may also wish to tag your teacher or friends). If you are struggling to keep your words down, do one tweet for fractures and another for dislocation (Alternatively post on Facebook, Instagram or SnapChat – don’t forget to tag). **Record your tweet below**



Type Here.

1. Use the comments section on YouTube to ask your questions. Make sure you also attempt to answer someone else’s question/s. **Record your question and the question you answered below** (or insert a screen shot)

## Learn to Activity

### Practical application

1. In a pair or small group work through the following scenarios and role-play the immediate treatment of the injuries (you will need a first aid kit with a triangle bandage and some form of splint). You need to **justify** (provide reasons why) your treatment as you go.
	1. John fell off his skateboard landing on his hands out in front of him. He heard a load crack and is holding his forearm, and is in a lot of pain.
	2. Danielle went in for a tackle and heard her shoulder pop. She has dislocated her shoulder before and thinks she has done it again.
	3. Vanessa fell while skiing and has passed out. People who saw the fall heard a very loud crack and Vanessa’s leg looks abnormal just above the knee.
	4. Frank went to catch the basketball but it hit the end of his finger. The top of his finger is now sticking out sideways from the rest of the finger.
2. Provide feedback to each other on the treatment AND justification.

## Match up

Match the classification and type of fracture with the picture

|  |  |  |
| --- | --- | --- |
| Complete |  |  |
| Comminuted |  |  |
| Closed |  |  |
| Open  |  |  |
| Incomplete/Greenstick |  |  |
| Complicated |  |  |
|  |  |  |

## Past/Practice HSC Questions

1. Outline types of hard tissue injuries. **3 marks**
2. Explain the management of hard tissue injuries. **5 marks** (use the scaffold if required)

**Scaffold for explain**

*Explain* – relate cause and effect; make the relationships between things evident.

|  |  |
| --- | --- |
| Topic to be explained:  | **Tips for writing**Statement of topic. Preview of causes and effects.  |
| Causes and effectsCause:Elaborate and supportEffect:Elaborate and support | Topic sentence at the beginning of each point on causes followed by explanation and examples to illustrate each cause. Topic sentence at the beginning of each point on effects followed by explanation and examples to illustrate the link to cause. Use linking words between each point (such as: therefore, thus, as a result, leading to), to illustrate the relationship. |
| Causes and effectsCause:Elaborate and supportEffect:Elaborate and support |
| Causes and effectsCause:Elaborate and supportEffect:Elaborate and support |
| RelationshipPointElaborate and support | Topic sentence that shows the direct link between cause and effect. Examples essential to further show the link.  |
| Why and/or how causes relate to effect. | The why and/or how can be illustrated within the previous paragraphs or separately at the end  |

1. What is the difference between a fracture and a dislocation? **3 marks**

# Assessment of injuries

|  |  |
| --- | --- |
| **Students learn about:** | **Students learn to:** |
| * assessment of injuries
* TOTAPS (Talk, Observe, Touch, Active and Passive movement, Skills test).
 | * perform assessment procedures to determine the nature and extent of injury in simulated scenarios.
 |

## Content

**Video** *Assessment of injuries* [here](https://youtu.be/gDpbgDMFxt0?list=PLesvqngPCeVM83T9yIZXK3la6P4i6fxFy).

**Reading** [pdhpe.net](https://www.pdhpe.net/sports-medicine/how-are-sports-injuries-classified-and-managed/assessment-of-injuries/)

 Relevant section of your textbook (Cambridge, Outcomes, etc)

## Cornell Note Taking Method

*These notes can be done in the booklet or in a separate exercise book (replace the words in the scaffold).*

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| **SUMMARY**Written straight after the video. (Checked in class)Brief summary highlighting the main points on the page.Used to find info later. |

## TOTAPS

Complete the flow chart as you complete your reading and/or watch the video.

STOP when…

## Learn to Activity

1. Develop a scenario and outline the steps you would take to assess the injury and where you would stop to treat the injury and seek further medical attention.

**Scenario Description**

|  |  |  |  |
| --- | --- | --- | --- |
| **Step** | **Description**Provide the context and what the person would see/hear etc | **Action/outcome**Provide what the assessor needs to ask/look/feel for etc | **Justify**Provide reasons why this is done(step 3 below) |
| **Danger** |  |  |  |
| **Response** |  |  |  |
| **Talk** |  |  |  |
| **Observe** |  |  |  |
| **Touch** |  |  |  |
| **Active movement** |  |  |  |
| **Passive movement** |  |  |  |
| **Skills test** |  |  |  |
| **Treatment** |  |  |  |

### Practical application

1. In a pair or small group work through some scenarios and role-play the assessment of the injuries. Your partner should:
	1. Device the scenario for you (from 1 above)
	2. Provide you with a context
	3. Give information as you progress through the scenario by answering questions and providing descriptions (e.g. you say you are observing the area, and they tell you what you see)
	4. Provide you with feedback at the end as to whether you included everything you should have in your assessment, including stopping at the appropriate time.
2. Together discuss and justify your scenario’s steps by completing the third column in the table above.

**Record your feedback here.**

## Sample Answer

The following answer is a sample answer provided by BOSTES for Question 29 (a) (ii) *Describe the assessment procedure used to determine the nature and extent of a sports injury*, in the 2011 HSC PDHPE exam paper. It is worth  **5 Marks**.

**Question 29 (a) (ii)  *Sample answer:***

*The procedure for assessing the nature and extent of sport injuries is known as the TOTAPS method:*

* *Firstly, an injured athlete is asked to describe what happened and to describe the nature of the injury (Talk).*
* *This is followed by the sports medicine professional observing the injury and the overall response of the athlete (Observe).*
* *Assuming there is no great risk of further injury or further pain, the sport medicine professional will gently touch the injury site looking for pain and feeling for deformity (Touch.)*
* *If there is still no pain, the athlete will be asked to move the injured area through a normal range of motions under their own means (Active movement).*
* *If there is still no pain present, the sports medicine professional can then move the injured athlete’s injured body part through its expected range of motion (Passive movement).*
* *Finally, a test of game-specific skills (Skill test) can be conducted.*

*If pain or abnormal function is observed at any time during the TOTAPS procedure, an athlete should not return to play. Only an athlete that successfully completes the skills test should be eligible to return to play before expert consultation.*

## Past/Practice HSC Questions

1. Why is it important to stop the assessment of an injury once it is clear the athlete cannot continue? **3 marks**
2. Billy has fallen to the ground after feeling large amounts of pain in his calf. Describe the steps you would take to assess his injury, including where you think you might stop and what type injury you think he may have suffered. **8 marks** (use the scaffold if needed)

**Scaffold for Describe**

*Describe* – Provide characteristics and features

|  |  |
| --- | --- |
| Topic to be described:  | **Tips for writing**Statement of issue. Preview of each characteristic or feature.  |
| Characteristic or featureDescription and example | Topic sentence at the beginning of each paragraph that states characteristic or feature followed by a description and examples to illustrate point. Use linking words such as: *for instance, for example, including* to introduce your examples.  |
| Characteristic or featureDescription and example |
| Characteristic or featureDescription and example |
| Characteristic or featureDescription and example |
| Conclusion  | Brief summary of main characteristics and features. Not necessary if you have given a thorough description in the body of your answer.  |

# Further notes

Write any additional notes that you wish here.